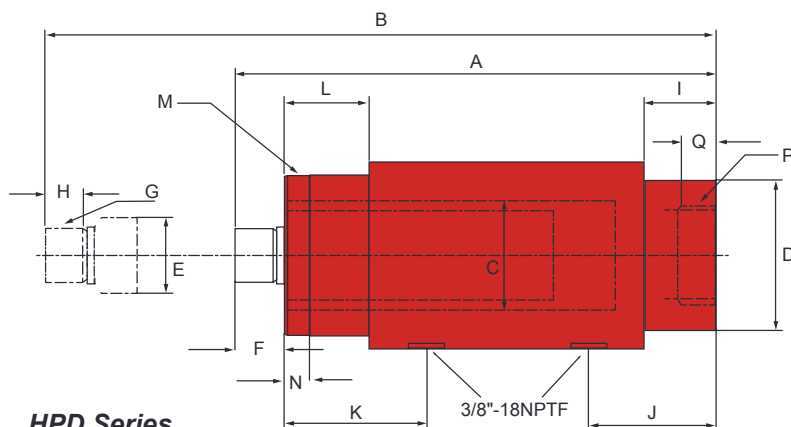


Precision Double Acting Cylinders

HPD Series - High-Cycle Fixtured Application



HPD Series

*Note: Precision double acting cylinders do not come with couplers.

- Provides hydraulic power on both extend and retract
- Designed for high cycle production applications
- High strength steel construction from gun drilled solid bar
- Rod wiper seals keep dirt and contamination out
- Clevis eye attachments are available
- Maximum working pressure: 10,000 psi / 700 bar



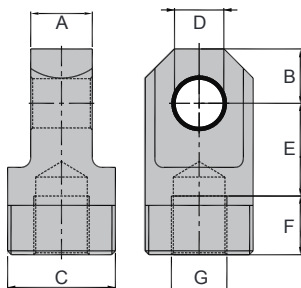
Related Product: Hoses

We offer a variety of hoses, fittings, lengths and materials.

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Cylinder Capacity (tons)	Model Number	Push Effective Area (in ²)	Pull Effective Area (in ²)	Collapsed Height A (in)	Extended Height B (in)	Cylinder Bore Dia. C (in)	Outside Dia. D (in)
9	HPD0906	1.77	1.01	13.78	19.88	1.50	2.52
	HPD0910	1.77	1.01	17.80	27.91	1.50	2.52
16	HPD1606	3.14	1.56	15.31	21.57	2.00	2.99
	HPD1610	3.14	1.56	19.29	29.53	2.00	2.99

Model Number	Rod				Base to Adv. Port J (in)	Top to Return Port K (in)	Collar					Weight (lbs)
	Dia. E (in)	Protrusion F (in)	Thread G (in)	Thread Length H (in)			Length L (in)	Thread M (in)	Thread Length N (in)	Int. Base Thread P (in)	Int. Base Thread Length Q (in)	
HPD0906	0.98	0.98	¾"-16	0.75	1.50	2.20	1.50	2"-12	0.60	1-11/16"-18	1.37	14.6
HPD0910	0.98	0.98	¾"-16	0.75	1.50	2.20	1.50	2"-12	0.60	1-11/16"-18	1.37	18.5
HPD1606	1.42	1.16	1½"-12	0.98	2.12	2.87	2.12	2½"-16	0.98	2-3/16"-16	1.61	22.0
HPD1606	1.42	1.16	1½"-12	0.98	2.12	2.87	2.12	2½"-16	0.98	2-3/16"-16	1.61	28.2



CED Series

By attaching this clevis eye to a HPD cylinder, you gain the ability to pull applications. For use with the 9 or 16 ton HPD cylinders only.

Dimensions (in)						
Model Number	A	B	C	D	E	F
CED09	1.00	0.90	1-11/16"-16N	0.75	1.31	0.94
CED16	1.25	1.10	2-3/16"-16N	1.00	1.88	1.19



Hand Pump Matching Chart

Hand Pumps

- Match up the stroke length to the capacity of your cylinder to find the selected hand pump to go with your cylinder

Stroke (in)	Capacity (tons)							
	5	10	15	25	30	55	75	100
< 1.0	0.69	-	-	-	-	-	-	-
1.0	1.00	2.24	3.14	5.14	6.49	10.99	16.10	20.57
2.0	2.00	4.48	6.28	10.28	12.98	21.98	32.20	41.14
3.0	3.00	6.72	9.42	15.42	19.47	32.97	48.30	61.71
4.0	4.00	8.96	12.56	20.56	25.96	43.96	64.40	82.28
5.0	5.00	11.20	15.70	25.70	32.45	54.95	80.50	102.85
6.0	6.00	13.44	18.84	30.84	38.94	65.94	96.60	123.42
7.0	7.00	15.68	21.98	35.98	45.43	76.93	112.70	143.99
8.0	8.00	17.92	25.12	41.12	51.92	87.92	128.80	164.56
9.0	9.00	20.16	28.26	46.26	58.41	98.91	144.90	185.13
10.0	10.00	22.40	31.40	51.40	64.90	109.90	161.00	205.70
12.0	12.00	26.88	37.68	61.68	77.80	131.88	193.20	246.84
13.0	13.00	29.12	40.82	66.82	84.37	142.87	209.30	267.41
14.0	14.00	31.36	43.96	71.96	90.86	153.86	225.40	287.98
Suggested* Hand Pump Models	P350 P601S	P1000 P1201S P1201		P2001 P2301 P2301M		P4301		P8701 P8701M

*The suggested pump model is based on oil capacity requirements of the cylinder.

Matching Chart

Air, Electric, and Gas Engine Pumps

- Match up the stroke length and capacity of the cylinder to find the suggested pump to work with your application

Stroke (in)	Capacity (tons)							
	5	10	15	25	30	55	75	100
< 1.0	0.69	-	-	-	-	-	-	-
1.0	1.00	2.24	3.14	5.14	6.49	10.99	16.10	20.57
2.0	2.00	4.48	6.28	10.28	12.98	21.98	32.20	41.14
3.0	3.00	6.72	9.42	15.42	19.47	32.97	48.30	61.71
4.0	4.00	8.96	12.56	20.56	25.96	43.96	64.40	82.28
5.0	5.00	11.20	15.70	25.70	32.45	54.95	80.50	102.85
6.0	6.00	13.44	18.84	30.84	38.94	65.94	96.60	123.42
7.0	7.00	15.68	21.98	35.98	45.43	76.93	112.70	143.99
8.0	8.00	17.92	25.12	41.12	51.92	87.92	128.80	164.56
9.0	9.00	20.16	28.26	46.26	58.41	98.91	144.90	185.13
10.0	10.00	22.40	31.40	51.40	64.90	109.90	161.00	205.70
12.0	12.00	26.88	37.68	61.68	77.80	131.88	193.20	246.84
13.0	13.00	29.12	40.82	66.82	84.37	142.87	209.30	267.41
14.0	14.00	31.36	43.96	71.96	90.86	153.86	225.40	287.98
Suggested Air/Electric/Gas Pump Models	PA600	PA1500 PA1500L PA1500M PA2000			PA3801 PA3801M PE30M3N01A		PE40M3N02A PE50M3N03A PG70M3N05	